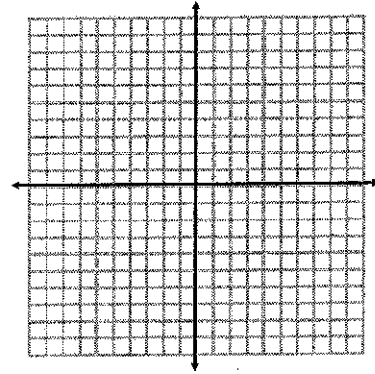


## HW - Quiz Prep - Transforming Quadratic Functions

1. Put the quadratic functions in order from narrowest to widest.

$$y = 3x^2 + 7x - 4 \quad y = \frac{1}{8}x^2 + 3 \quad y = -4(x - 3)^2 \quad y = x^2 + 8$$

2. Graph the function  $y = -2(x + 3)^2 + 1$  precisely.



For each of the following functions

- List the value(s) of a, c, h, or k
- Describe how each of these values transforms the graph.

3.  $y = -\frac{1}{8}x^2 - 5$

a =

c =

4.  $y = 4(x - 3)^2 + 5$

a =

h =

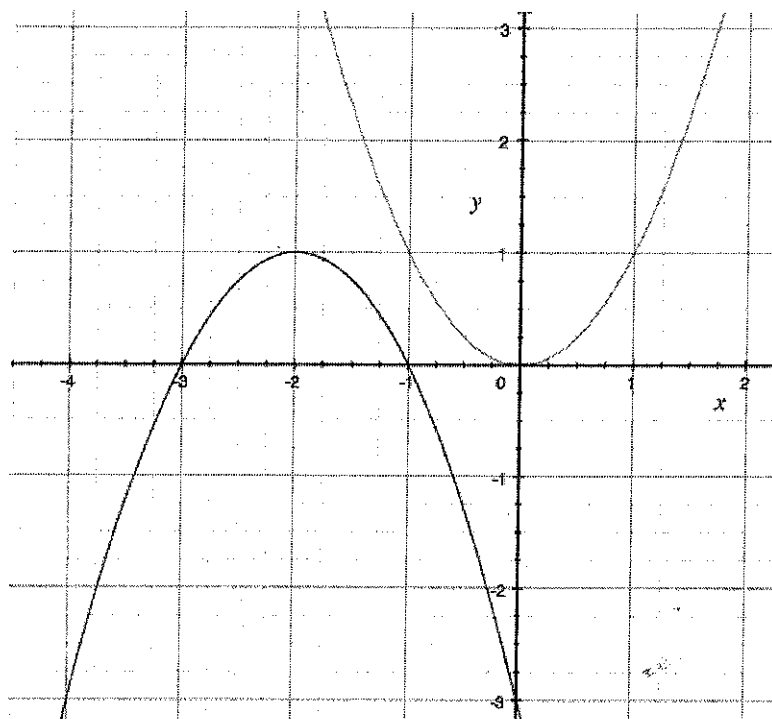
k =

5. Write the equation of a parabola that is skinnier than  $y = x^2$ , that opens up (is concave up), and that is shifted up 3 units.

6. Write the equation of a parabola that opens down (is concave down), is standard width, and whose vertex is at  $(10,6)$ .

Consider the graph provided. ( $y = x^2$ , the parent function, is the lighter graph)

7.



A. Describe all the ways the graph is different than (a transformation of) the parent function.

B. Use your answers in part A to help you write an equation for the graph.